



<http://www.natsca.org>

Journal of Natural Science Collections

Title: The Edenhall Collection: the origins and composition of a sporting family's collection of bird and mammal taxidermy

Author(s): Jackson, S. & Sellers, R. M.

Source: Jackson, S. & Sellers, R. M. (2021). The Edenhall Collection: the origins and composition of a sporting family's collection of bird and mammal taxidermy. *Journal of Natural Science Collections*, Volume 8, 55 - 65.

URL: <http://www.natsca.org/article/2632>

NatSCA supports open access publication as part of its mission is to promote and support natural science collections. NatSCA uses the Creative Commons Attribution License (CCAL) <http://creativecommons.org/licenses/by/2.5/> for all works we publish. Under CCAL authors retain ownership of the copyright for their article, but authors allow anyone to download, reuse, reprint, modify, distribute, and/or copy articles in NatSCA publications, so long as the original authors and source are cited.

The Edenhall Collection: the origins and composition of a sporting family's collection of bird and mammal taxidermy

Simon Jackson^{1*} and Robin M. Sellers²

¹ Independent Museum Consultant, Old Parsonage Barn, Barn Street, Crewkerne, Somerset, TA18 8BP

² Crag House, Ellerslie Park, Gosforth, Cumbria CA20 1BL

Received: 24th June 2020

Corresponding author: drsimonjackson@gmail.com

Accepted: 27th Jan 2021

Citation: Jackson, S., and Sellers, R. M. 2021. The Edenhall Collection: the origins and composition of a sporting family's collection of bird and mammal taxidermy. *Journal of Natural Science Collections*. 8. pp.55-65.

Abstract

Two generations of the Musgrave family of Edenhall near Penrith, in what was then Cumberland, assembled a collection of bird and mammal taxidermy between about 1830 and 1880. When the estate was sold in the 1920's, a substantial part of this material was donated to Tullie House Museum and Art Gallery in Carlisle where it forms part of the Museum's taxidermy collection. The bulk of the latter collection originated from specimens donated by naturalists but the Edenhall material is unusual in that it was created by people who were primarily sportsmen rather than true naturalists. This paper describes the composition and geographical origins of the Edenhall Collection based on a catalogue prepared by Museum staff at the time it was donated to the Museum. In total the Edenhall Collection comprised 154 specimens of 111 species of bird and 15 specimens of 10 species of mammal. Of those for which the locality was recorded, the majority had been obtained in Cumberland with a lesser but still significant proportion from Caithness in the north of Scotland, together with a small number from other areas. Around 38% of the bird specimens, however, were of unknown provenance but most were probably from Cumberland. Birds of prey and quarry species were well represented and so too were ardeids (herons, bitterns and egrets); by contrast small birds, mainly passerines, were under-represented. The collection also contained a number of locally-taken rarities, notably Honey-buzzard *Pernis apivorus* (Linnaeus, 1758) and Two-barred Crossbill *Loxia leucoptera* Gmelin, 1789, as well as the first Lakeland records of Purple Heron *Ardea purpurea* Linnaeus, 1766 and Squacco Heron *Ardeola ralloides* (Scopoli, 1769). Overall, about a half of all the bird species represented were those with small local populations and which were therefore most at risk from shooting and associated pursuits.

Keywords: birds, mammals, taxidermy, skins, collections, sportsmen, Cumberland, Caithness

Introduction

Tullie House Museum and Art Gallery in Carlisle has a collection of approximately 4,500 bird and mammal skins and taxidermy specimens, which forms part of the Arts Council England Designated Natural Science Collection (see Jackson, 2020 for a

description of the overall Designated Collections). Much of this material was donated to the Museum by amateur and professional naturalists, ornithologists or mammalogists. One substantial donation was the Edenhall Collection assembled by the Musgrave family, owners of a large estate near Penrith, in what was then Cumberland, and



© by the authors, 2021, except where otherwise attributed. Published by the Natural Sciences Collections Association. This work is licenced under the Creative Commons Attribution 4.0 International Licence. To view a copy of this licence, visit: <http://creativecommons.org/licenses/by/4.0/>

who were primarily sportsmen, with some interest in the natural world. The composition of these private collections, particularly those assembled by persons who were not naturalists in the true sense of the word, has received little attention from historians of natural history, yet sportsmen were one of the five main groups of people (the others were gamekeepers, collectors (including naturalists), gunners and trappers, although some overlap between these various categories existed) responsible for much of the direct destruction of wildlife that took place in Britain between the middle of the eighteenth century and the middle of the twentieth century (see, for instance, Bourne, 2006; Lovegrove, 2007; Shrubbs, 2013). Here we describe a case study of the composition and origins of a provincial collection of bird and mammal taxidermy based on the Edenhall Collection assembled over two generations by a family of wealthy landowners who were primarily sportsmen.

Catalogue of the Edenhall Collection

When a substantial part of the Edenhall Collection was donated to the, then, Carlisle Museum in 1927 (accessioned as CALMG:1927.42) a summary of its contents was prepared, and it is to this document that the 'Catalogue of the Edenhall Collection' refers (with the same accession number as the rest of the collection), or, to give it its formal title, the 'List of Birds Presented by Sir Nigel Courtenay Musgrave to Carlisle Museum in 1927'. In practice, it lists all birds and mammals in the collection, differentiating between those accepted into the Museum's collection ("Specimens Retained Mounted and Placed in the Museum Habitat Groups", and "Specimens Reduced to Cabinet Skins", those destroyed because they were in poor condition, and those retained by the Musgraves. The document is currently held in the natural history archive at Tullie House, and because of its poor condition, we have prepared a transcript of its contents (further details in Jackson and Sellers, 2020). Although this version was clearly prepared by Museum staff, the 'Preface' states that the main (first) list was probably based on an earlier one drawn up by Sir Richard Courtenay Musgrave. The remaining sections were presumably based upon information provided by the Musgrave family, but were not transcribed verbatim, as different common names for species are used whilst mistakes were corrected. Tucked loose inside the catalogue is a two page, handwritten letter from Mrs Hope to her son, L.E.Hope, the Museum's Director at the time, providing some information about how one of the birds, a Gyr Falcon *Falco rusticolus* Linnaeus, 1758, came to be in the Edenhall Collection.

Many of the catalogue entries provide at least some information about the provenance of the specimens. This includes 102 specimens (60% of the collection) with locality details. In rare cases, dates are also included (for 11 specimens or 6.5% of the collection). Collector information is known for 36 specimens (21%), and where this is not known, the acquisition source (e.g. purchased from) is listed for a further 11 specimens (6.5% of the collection). Additionally, details are often recorded for how the specimens were collected. This is known for 103 specimens (61% of the collection), and in all but one case (where the specimen was found dead), the individuals were killed (documented as "killed", "shot", or "trapped"; see Discussion). Collecting method details are not known for the remaining 39%.

Unfortunately, there are some inconsistencies between the various lists in the catalogue. For instance, a Honey-buzzard *P. apivorus*, taken at Netherby, Cumberland, is listed in the 'Specimens not included in the gift to the Museum' section of the catalogue, yet what is plainly the same bird is shown in the Museum's records as Accession No. CALMG:1927.42.15. In view of these discrepancies, and to provide a clear basis on which to analyse the data, we have prepared our own list of the contents of the collection and its 169 specimens. This provides our best estimates of the number of specimens for each individual species, and their assumed fates; further details are given with the transcript of the Edenhall catalogue (Jackson and Sellers, 2020) and are summarised here in Appendices I and II.

History of the Edenhall Collection

The 'Preface' to the catalogue states that the collection was started by Sir George Musgrave, Bt (1799-1872). It comprised mainly birds taken from the area around Edenhall, between about 1830 and 1880 (roughly the period between when Sir George Musgrave was a young man and the death of the younger of his sons who shared his interest in birds and mammals) and probably shot on the Edenhall Estate itself, which extended almost as far north as Armathwaite, 15 km from Edenhall. Philip Turner, a taxidermist in nearby Penrith, active in the 1840s and 1850s, is credited with having preserved and mounted this early material (see also Sellers, 2018b). The collection was added to by two of Sir George's sons, Philip Musgrave (1833-1859) and his younger brother Sir Richard Courtenay Musgrave (1838-1881). The latter is credited with having contributed 18 specimens, some from Lakeland (the modern-day county of Cumbria, as defined in Sellers and Hewitt, 2020), others from Caithness, an area popular with

English sportsmen in the second half of the nineteenth century. The family did not, however, supply all the material in the collection; some were gifts from friends or acquaintances, and there were seven specimens which had been purchased from Henry Shaw of Shrewsbury, a well-known Victorian taxidermist (Morris, 2010).

The catalogue provides limited information on the original style of the collection. However, the various different categories of the catalogue (described above) indicate that they were all initially mounted (apart from one, the Pine Marten *Martes martes* (Linnaeus, 1758), for which information is wanting (Museum records indicate that the specimen was reduced to a skull). Furthermore, the final section of the catalogue, provides a list of specimens which were essentially in cases, which number 65 of the specimens. Some of the specimens including herons, were cased on either side of the inner doorway in the Edenhall entrance hall, forming a fine decoration to the elegant mansion (Fig. 1). This shows two displays of taxidermy birds, many of which appear to be either herons, egrets or bitterns (Ardeidae). Of the seven larger birds depicted, at least five show characteristics of Grey Herons *Ardea cinerea* Linnaeus, 1758, a sixth (the upper bird on the right of the display to the left of the doorway) has the darker plumage and long,

fine bill typical of a Purple Heron *A. purpurea*), whilst the seventh (at the left-hand side of this same display) is possibly a Bittern *Botaurus stellaris* (Linnaeus, 1758). The catalogue, however, lists only one of each of these three species. Why this material failed to get mentioned in the catalogue, and what happened to it subsequently is a mystery. Of the ten small to medium-sized birds in the photograph, six appear to be herons, bitterns or egrets. It has not been possible to identify the species shown, but the total is consistent with what is quoted in the catalogue.

Composition and Significance of the Edenhall Collection

In total, the catalogue makes reference to 169 specimens: 154 specimens of 111 species of bird, and 15 specimens of 10 species of mammal. According to the catalogue, 72 specimens were not given to the Museum. However, 10 of these have been accessioned, indicating error in the original transcription of the catalogue. This means 62 specimens, or 37%, were actually not given to the Museum. Of the remaining 107 specimens (63%) which were given to the Museum, 60 specimens (36% of the entire collection) were disposed of (according to the catalogue these included specimens listed as being “destroyed as spoiled through being sunbleached, or by decay”). This left 47 specimens (28%) in the Museum collections (see Appendix I and II), and intriguingly this included such rarities such as the Squacco Heron *A. ralloides* and Purple Heron *A. purpurea*. The Musgraves retained virtually all the mammals (apart from the Polecat *Mustela putorius* Linnaeus, 1758 and Pine Marten *M. martes*), though, for unknown reasons these were also destroyed.

Of the 154 bird specimens, 61 (40%) were definitely obtained in Lakeland, 27 (18%) from Caithness and 8 (5%) from elsewhere. For the remaining 58 (38%) bird specimens no details of locality have survived, but, as the ‘Preface’ to the catalogue notes, the bulk of the material was taken on the Musgrave’s estate and we conclude that much of the material of unknown provenance was likely to have been taken locally. Most species (69% birds, 70% mammals) are represented by only one specimen. Therefore, only the remaining approximately 30% of species are represented by two to four specimens (duplicates). Only two species, Ptarmigan *Lagopus muta* (Montin, 1776) and Otter *Lutra lutra* (Linnaeus, 1758), are represented by four specimens. Amongst the birds, the duplicates are where male and female plumage differs, Sparrowhawk *Accipiter nisus* (Linnaeus, 1758) being a typical example, or in which breeding and winter plumages differ, as in the Ptarmigan *L. muta*.



Figure 1. A photograph dating from c.1910 of the doorway between the main entrance hall and the inner hall at Edenhall, showing two displays of taxidermy birds, many of which appear to be either herons, egrets or bitterns (see also comments in text). © Penrith and Eden Museum (Eden District Council).

The sex is known (documented) for 61 of the 154 bird specimens. Overall, there are more male specimens (38) than female (23), which represent 33 and 21 species respectively. The 'wildfowl' especially include many male representatives, for instance, there are seven 'duck' (Anatidae) species only represented by males. In the case of the Ruff *Calidris pugnax* (Linnaeus, 1758), all three specimens are male. The picture is more complex for 'birds of prey'. There are only male examples of some species including Golden Eagle *Aquila chrysaetos* (Linnaeus, 1758), White-tailed Eagle *Haliaeetus albicilla* (Linnaeus, 1758) and Hobby *Falco subbuteo* Linnaeus, 1758, but for the Peregrine *Falco peregrinus* Tunstall, 1771 and Merlin *Falco columbarius* Linnaeus, 1758, female specimens outnumber those of males by 2 to 1, and the only Goshawk *Accipiter gentilis* (Linnaeus, 1758) specimen, for which sex has been documented, is female (Fig. 2). Thus although there is an overall bias towards males in the collection, this varies between taxonomic groups.



Figure 2. Skin of a second winter, female Goshawk *A. gentilis*, taken at Berriedale, Caithness in the 19th century; originally part of the Edenhall Collection and now part of the Tullie House Museum Collection (Accession No. CALMG 1927.42.12). (© Tullie House Museum and Art Gallery, image taken by Robin Sellers).

Table 1 shows the composition of the collection, using the sort of categories Victorian sportsmen might have recognised, rather than according to formal taxonomic groupings (although there are clear similarities between the two). Birds of prey, both diurnal and nocturnal, are well represented, comprising up to 25% of the collection in terms of the number of specimens, with all the species on the Cumbria county list being included except Black Kite *Milvus migrans* (Boddaert, 1783) (cf. Sellers, 2015), though not necessarily by locally taken examples. Much the same is true of the bitterns, egrets and herons (order Pelecaniformes, family Ardeidae), with eight of the nine species recorded in Cumbria being found in the Edenhall Collection, the exception being the Great White Egret *Ardea alba* Linnaeus, 1758. Quarry species including gamebirds, wildfowl and waders are reasonably well represented, and make up almost half of the collection in terms of the number of specimens. However, there are some curious omissions – no Grey Partridges *Perdix perdix* (Linnaeus, 1758), Pheasants *Phasianus colchicus* Linnaeus, 1758 or Mallard *Anas platyrhynchos* Linnaeus, 1758, for instance. Divers and grebes are also almost fully represented, as are auks, but other seabirds less well, with just two species of gull, one skua and no terns. Passerines, which constituted around half of all bird species in Lakeland in the nineteenth century, have just eight representatives, whilst there are just four small birds (taken to be birds with weights <30 g), namely Nuthatch *Sitta europaea* Linnaeus, 1758, Crossbill *Loxia curvirostra* Linnaeus, 1758, Two-barred Crossbill *L. leucoptera* and Snow Bunting *Plectrophenax nivalis* (Linnaeus, 1758). A further four species belong to three other orders (the 'near passerines'), all poorly represented in Lakeland.

Rarities in the collection

The entire collection included a number of rare birds (following, for example, Dymond *et al.*, 1989). These include either vagrants (birds outside their normal breeding or wintering ranges, or away from their usual migration routes) or species with very small local populations. The catalogue draws attention to three, Purple Heron *A. purpurea* and Squacco Heron *A. ralloides*, both of which were the first of their kind to be taken in Lakeland, and Rough-legged Buzzard *Buteo lagopus* (Pontoppidan, 1763), which in the nineteenth century was probably better characterised as an occasional winter visitor and passage migrant in both Lakeland and Caithness rather than a true vagrant (comments on status based on Macpherson (1892) for Lakeland, and Harvie-Brown and Buckley (1887) for Caithness).

Grouping	Taxonomic Order	Percentage of bird specimens in entire collection (n=154)	Percentage of bird species in entire collection (n=111)
Wildfowl	Anseriformes	18	17
Gamebirds	Galliformes	7	5
Divers and grebes	Gaviiformes, Podicipediformes	7	5
Seabirds	Procellariiformes, Suliformes, Charadriiformes (families Lariidae, Stercoridae and Alcidae)	9	9
Hérons & rails	Pelecaniformes, Gruiformes	8	11
Birds of Prey	Accipitriformes, Strigiformes, Falconiformes	25	23
Waders	Charadriiformes (families Haematopodidae, Recurvirostridae and Charadriidae)	16	19
Near passerines	Coraciiformes, Bucerotiformes, Piciformes	3	4
Passerines	Passeriformes	7	7

Table 1. Composition of principal groupings of birds in the Edenhall Collection.

Other rarities included the following:

from Lakeland: Osprey *Pandion haliaetus* Osprey *Pandion haliaetus* (Linnaeus, 1758), Honey-buzzard *P. apivorus*, Great Northern Diver *Gavia immer* (Brünnich, 1764), Slavonian Grebe *Podiceps auritus* (Linnaeus, 1758), Spotted Crake *Porzana porzana* (Linnaeus, 1766), Gyr Falcon *F. rusticolus*, Goshawk *A. gentilis*, Marsh Harrier *Circus aeruginosus* (Linnaeus, 1758) (which appears to have been not uncommon as a breeding bird in Lakeland at the beginning of the nineteenth century but was considered a rarity by the century's end), Montagu's Harrier *Circus pygargus* (Linnaeus, 1758) and Two-barred Crossbill *L. leucoptera*.

from Caithness: Goshawk *A. gentilis*.

Provenance unknown: Harlequin Duck *Histrionicus histrionicus* (Linnaeus, 1758), Little Bittern *Ixobrychus minutus* (Linnaeus, 1766), Night-heron *Nycticorax nycticorax* (Linnaeus, 1758), Cattle Egret *Bubulcus ibis* (Linnaeus, 1758), Little Egret *Egretta garzetta* (Linnaeus, 1766), Red Kite *Milvus milvus* (Linnaeus, 1758), Great Snipe *Gallinago media* (Latham, 1787), Wood Sandpiper *Tringa glareola* Linnaeus, 1758, Little Auk *Alle alle* (Linnaeus, 1758), Scops Owl *Otus scops* (Linnaeus, 1758) and Tengmalm's Owl *Aegolius funereus* (Linnaeus, 1758).

The Goshawk, *A. gentilis* from Caithness (Figure 2) is of particular significance, being only the third fully authenticated nineteenth century record of that species from the area. It was a second year female with unusually long wings and appears to have been a bird from the north of the species' European range, that is, from Scandinavia (further details in Sellers, 2018a).

Overall 23 (21%) of the bird species in the collection were vagrants and as such would have been regarded as rarities in the nineteenth century, and, with the exception of the Little Egret *E. garzetta*, which colonised Britain in the 1990s (Balmer *et al.*, 2013), are still regarded as such. A substantial proportion of the remaining species had either small local breeding or wintering populations (for present purposes taken to be respectively <150 breeding pairs or <300 birds) or to have occurred in Lakeland on passage in limited numbers (<300 birds present at any one time). These potentially 'at risk' species (see Appendix I) with their frequency of occurrence is shown in Figure 3. Around half (57 of 111 or 51%) of the bird species represented were those most likely to have been 'at risk' of being affected by collecting.

The collection may formerly have included several additional specimens, for a receipt dated 27th December 1850 exists for several specimens preserved for Sir George Musgrave by Philip Turner, the taxidermist in Penrith (Sellers, 2018b). They include the following not mentioned in the catalogue: an Eider *Somateria mollissima* (Linnaeus, 1758), a Ruff *C. pugnax* (three are listed, but the receipt refers to four specimens), a 'globe of foreign birds', a Rabbit *Oryctolagus cuniculus* (Linnaeus, 1758) and a 'chamelion', probably the Common Chameleon *Chamaeleo chamaeleon* (Linnaeus, 1758). What happened to these additional specimens is unknown, but it seems likely that they were either exchanged with other collectors, given away as gifts, or, having being subject to decay, were destroyed. This applies also to four of the seven large ardeids shown in Figure 1 (tentatively identified as Grey Herons *A. cinerea*) not mentioned in the catalogue.

The much smaller number of mammals in the collection includes at least three species (Otter *L. lutra*, Pine Marten *M. martes* and Polecat *M. putorius*, *cf.* Appendix II) with small and potentially vulnerable populations; all three subsequently went extinct in Lakeland, but are slowly making a comeback with more enlightened attitudes to nature conservation. Although little quantitative data is available, it is likely that Red Squirrels *Sciurus vulgaris* Linnaeus, 1758 were quite widespread in Lakeland in the past but in decline (Macpherson, 1892). A fifth species, the Wildcat *Felis sylvestris* Schreber, 1777, may once have occurred in Lakeland but had been eradicated before the Musgraves began collecting (Macpherson, 1892); the example in their collection had been acquired from Scotland.

The Musgraves do not appear to have made any attempt to publish the particulars of the more unusual birds they had collected (their name does not appear in a bibliography of Cumbrian ornithology, for instance, *cf.* Sellers *et al.*, 2017). Details of a number of the rarities listed above did, nevertheless, become known to the leading British naturalists of the day. The Squacco Heron *A. ralloides* is referred to by Yarrell (1856) in his *A History of British Birds* and he records that he obtained his information about it from T. C. Heysham, the leading Lakeland ornithologist of the period, and who in turn had learned about it from 'a communication between Sir George Musgrave and Mr Jesse', though who Mr Jesse was is not known. Gould (1873b), writing almost a generation later, also makes reference to this bird, but he had obtained his information direct from Sir George's son, R. C. Musgrave, in 1865, presumably having become aware of the connection through Yarrell's book. The suspicion is that the Musgraves

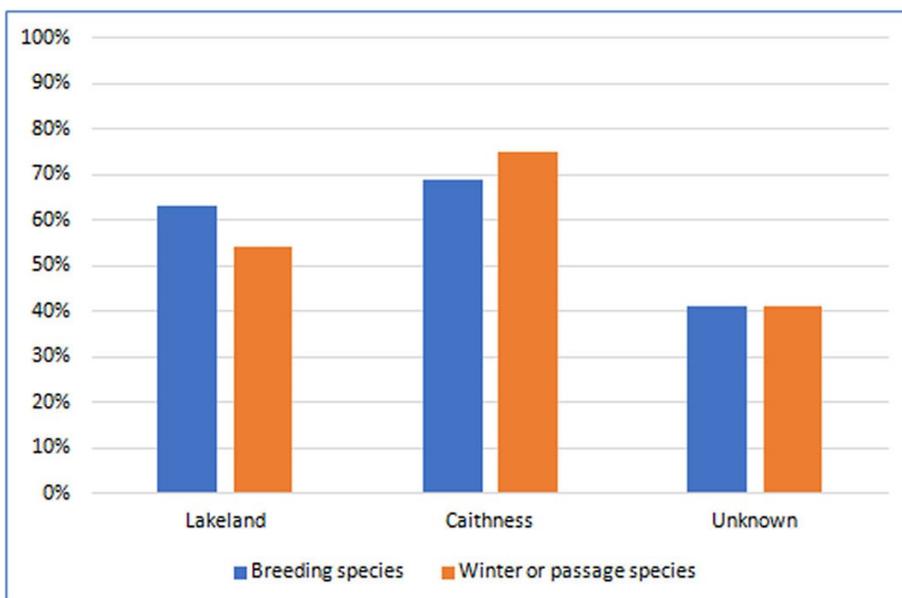


Figure 3 Frequency of occurrence of bird species potentially at risk in relation to where collected.

were unsure of the identification of this bird (it was the first to be found in Lakeland, and one of the first in Britain) and that they had made representation to 'Mr Jesse', and perhaps others, to help determine or confirm just what species it was. The Purple Heron *A. purpurea* seems to have come to light in correspondence between Gould and R. C. Musgrave sometime before 1870, most likely following the initial contact over the Squacco Heron *A. ralloides* (Gould, 1873a). The Gyr Falcon (*F. rusticolus*) in the collection had originally been taken by a poacher (this is evident from the letter tucked into the catalogue) and had been preserved by Thomas Hope, another taxidermist in nearby Penrith (and father of L. E. Hope, the Director at the then Carlisle Museum). It was purchased from Hope Senior by Sir George Musgrave, a fact reported by H. Harrison (1866) in a letter to *The Zoologist* in which he notes that he had himself tried to purchase the bird, only to discover that it had already been sold. He does not say how he had become aware of the bird. Details of most of the other rarities did not appear in print until the publication of Macpherson's *A Vertebrate Fauna of Lakeland* in 1892.

Discussion

Quite what induced Sir George Musgrave to begin collecting birds and mammals is not on record, but it was something that many of his contemporaries among the landed gentry and well-to-do did. He used the material he acquired to decorate his home at Edenhall, a practice which his sons continued. These cases of taxidermy birds and mammals were, in part, marks of his status, wealth (the costs of having animals preserved by professional taxidermists were considerable, for example see Morris, 2010), his prowess as a sportsman, mementoes of time spent in the field or activities on the Edenhall Estate and, no doubt, reflected a broad interest in natural history. If the collection was acquired in this spirit, it is not surprising that the majority of species are represented by only one specimen, and that where there were duplicates, this mainly reflected variation in plumages (discussed above).

The overall bias towards males in birds, described above, may reflect historical active selection, in the case of some taxa, including Anatidae, where the male plumages are more colourful. However, some of this collecting bias may have been non-deliberate: in a large study of 2 million bird and mammal specimen records from 5 large international museums, Cooper *et al.*, (2019) concluded that although some of the bias in collections towards males was a result of deliberate selection, much of it was also non-deliberate and

influenced by factors relating to characteristics of individual species and how they were trapped.

The collection is also notable for the inclusion of certain rarities such as the Purple Heron *Ardea purpurea* and Squacco Heron *Ardeola ralloides*, which were the first of their kind to be obtained in Lakeland (Macpherson, 1892), which likely influenced the Musgraves' interest in these birds; that properly set up they can make for a spectacular display may have been a factor too. Common birds and especially small ones were underrepresented, possibly because everyday species were of no great interest, or perhaps because the Musgraves were far more interested in non-passerines generally. There is no published information on other collections of similar size, but the composition of the Musgraves' collection is broadly similar to the material that passed through taxidermists' hands, exemplified by the records for Raine Bros, the Carlisle taxidermists (Sellers, 2017).

Where collection data is provided in the catalogue (see above), all but one of the specimens had been shot, caught in traps or "killed" (by unknown methods), and the question arises whether these activities had any effect on the populations of the species concerned. The numbers taken by the Musgraves were small and by themselves were unlikely to have had any detectable effect on local populations. However, it is the combined effect of many sportsmen, collectors and gamekeepers on wildlife over long periods that may have had a detrimental effect on the viability of certain bird populations. There were at least twenty collectors with a serious interest in birds or mammals active in Lakeland in the nineteenth and early twentieth centuries (Shrubb, 2013). There were many incidental natural history collectors, as well as people taking wild animals to decorate or adorn such things as fire screens (feathers), mammal heads on shields (*de rigueur* for sportsmen), bell-pulls (Foxes' tails were very popular) and so on (see, for instance, Sellers, 2017). Gamekeepers were probably the group that did the most damage to wildlife, particularly to birds of prey. There appear to be no known records of their activities in Lakeland, but looking at other regions, they had a very considerable impact on wildlife populations, some effects of which are still felt today (e.g. Bourne, 2006; Lovegrove, 2007). How much impact the combined efforts of collectors, sportsmen and gamekeepers has had on the fauna of Lakeland is difficult to determine, but the relatively high percentage of species in the 'most at risk' category hints that it might not have been negligible. The presence of a variety of rarities comes as no

surprise, but as these would have been birds outside their normal breeding or wintering ranges or away from their usual migration routes, their taking is unlikely to have had any discernible effect on their populations. This combined practice could, however, have effectively forestalled any possibility of such species becoming established in Lakeland, although there are, indeed, many factors influencing the establishment of a viable population.

Acknowledgements

Tullie House Museum and Art Gallery is acknowledged for permitting access to the zoological collections (which was done via the first author when he was in post as a Curator). Tullie House are also acknowledged for permission to reproduce the image in Figure 2 and we thank Assistant Curator, Claire Sleightholm for additional collections data. We also thank the anonymous reviewers and Journal Editor for helpful comments in the preparation of this manuscript, David and Judith Clarke for drawing the existence of the photograph illustrated in Figure 1 to our attention, and to Dr Sydney Chapman of Penrith and Eden Museum (Eden District Council) for permission to reproduce this photograph.

References

- Balmer, D. E., Gillings, S., Caffrey, B. J., Swann, R. L., Downie, I. S. and Fuller, R. J., 2013. *Bird Atlas 2007-11: The Breeding and Wintering Birds of Britain and Ireland*. Thetford: BTO Books.
- Bourne, W. R. P., 2006. The Scottish wildlife clearances. *Archives of Natural History*, 33, pp.344-347.
- Cooper, N., Bond, A. L., Davis, J. L., Portela Miguez, R., Tomsett, L., and Helgen, K. M., 2019. Sex biases in bird and mammal natural history collections. *Proceedings of the Royal Society B*, 286, 20192025.
- Dymond, J.N., Fraser, P. A. and Gantlett, S. J. M., 1989. *Rare Birds in Britain and Ireland*. Calton: T & A. D. Poyser.
- Gould, J., 1873a. *The Birds of Great Britain, Vol.1*. London. Plate 13 et seq.
- Gould, J., 1873b. *The Birds of Great Britain, Vol.4*. London. Plate 5 et seq.
- Harvie-Brown, J. A. and Buckley, T. E., 1887. *A Vertebrate Fauna of Sutherland, Caithness and West Cromarty*. Edinburgh: David Douglas.
- Harrison, H., 1866. Jerfalcon at Crosby Ravenscroft. *Zoologist, 2nd Series*, 1, p.30.
- Jackson, S., 2020. Secrets of Designation unlocked: the Tullie House natural science collection and a window into Cumbria biodiversity. *Journal of Natural Science Collections*, 7, pp.24-33.
- Jackson, S. and Sellers, R. M., 2020. *Catalogue of the Edenhall Collection of stuffed birds and mammals*. Unpublished report, 2020.
- Lovegrove, R., 2007. *Silent Fields: The Long Decline of a Nation's Wildlife*. Oxford: Oxford University Press.
- Macpherson, H. A., 1892. *A Vertebrate Fauna of Lakeland*. Edinburgh: David Douglas.
- Morris, P., 2010. *A History of Taxidermy: Art, Science and Bad Taste*. Ascot: MPM Publishing.
- Sellers, R. M., 2015. *Check-list of the birds of Cumbria*. Unpublished report.
- Sellers, R. M., 2017. Birds and mammals preserved by R. & G. W. Raine Brothers, the Carlisle taxidermists, 1918-1943. *Archives of Natural History*, 44, pp.74-81.
- Sellers, R. M., 2018a. A previously unrecorded early occurrence of the Goshawk in Caithness and additional information about another early record. *Scottish Birds*, 38, pp.139-140.
- Sellers, R. M., 2018b. Lakeland taxidermists in the 19th and early 20th centuries. *Transactions of the Carlisle Natural History Society*, 13, pp.107-132.
- Sellers, R. M. and Hewitt, S., 2020. Carlisle Museum's Natural History Record Bureau, 1902-1912: Britain's first local environmental records centre. *Archives of Natural History*, 47, pp.1-15.
- Sellers, R. M., Shackleton, D, and Armsby, A. F., 2017. Ornithology in Cumbria in the 16th, 17th, 18th and 19th Centuries: a bibliography. *Cumbria Biodiversity Data Centre Occasional Publication No. 3*, Issue 1.
- Shrubb, M., 2013. *Feasting, Fowling and Feathers – A History of the Exploitation of Wild Birds*. London: T. & A. D. Poyser. Chapter 10.
- Yarrell, W., 1856. *A History of British Birds*, Vol.2, 3rd Edition. London, Jan van Voorst, pp.563-564.

Appendix I. Bird species in the Edenhall Collection.

Column A: status in the 19th century, based on Harvie-Brown & Buckley (1887) for Caithness, and on Macpherson (1892) for Lakeland and the other two categories. Status categories as follows: P, passage migrant; R, resident breeder (present throughout the year); S, breeding summer visitor; V, vagrant, W, winter visitor and X, not on British List.

Column B: Small local population, categorised as follows:

** small local breeding population (<150 pairs).

* small numbers occurring locally in winter or on passage (<300 birds).

**/* small local breeding and wintering population (<300 birds).

Column C: number of specimens in the Edenhall Collection; N, preserved with nest and eggs; Y, preserved with young (not included in the number of specimens). Note that some species are represented in two or more of the four groups listed here.

Column D: Specimens retained for the Tullie House Collection marked TH; all others either destroyed or retained by the Musgraves.

Purchased from H. Shaw of Shrewsbury.

	A	B	C	D
<i>Species taken in Lakeland (61 specimens of 50 species)</i>				
Barnacle Goose <i>Branta leucopsis</i> (Bechstein, 1803)	W P	*	1	
White-fronted Goose <i>Anser albifrons</i> (Scopoli, 1769)	W P	*	1	
Bewick's Swan <i>Cygnus columbianus</i> (Ord, 1815)	P	*	1	
Whooper Swan <i>Cygnus cygnus</i> (Linnaeus, 1758)	P	*	2	
Shoveler <i>Spatula clypeata</i> (Linnaeus, 1758)	R W	**/*	1	TH
Gadwall <i>Mareca strepera</i> (Linnaeus, 1758)	R W	**/*	1	TH
Teal <i>Anas crecca</i> Linnaeus, 1758	R W	**	1	
Pochard <i>Aythya ferina</i> (Linnaeus, 1758)	R W	**	1	
Tufted Duck <i>Aythya fuligula</i> (Linnaeus, 1758)	R W	**	1	
Goldeneye <i>Bucephala clangula</i> (Linnaeus, 1758)	W P		2	
Goosander <i>Mergus merganser</i> Linnaeus, 1758	W		2	
Black Grouse <i>Lyrurus tetrix</i> (Linnaeus, 1758)	R	**/*	2	TH(2)
Red Grouse <i>Lagopus lagopus</i> (Latham, 1787)	R		1	
Red-throated Diver <i>Gavia stellata</i> (Pontoppidan, 1763)	W	*	2	TH(1)
Great Northern Diver <i>Gavia immer</i> (Brünnich, 1764)	V		1	
Little Grebe <i>Tachybaptus ruficollis</i> (Pallas, 1764)	R W	**	1	
Great Crested Grebe <i>Podiceps cristatus</i> (Linnaeus, 1758)	R W	**	1	
Slavonian Grebe <i>Podiceps auritus</i> (Linnaeus, 1758)	V		2	
Bittern <i>Botaurus stellaris</i> (Linnaeus, 1758)	W	*	1	
Squacco Heron <i>Ardeola ralloides</i> (Scopoli, 1769)	V		1	TH
Grey Heron <i>Ardea cinerea</i> Linnaeus, 1758	R		1	
Purple Heron <i>Ardea purpurea</i> (Linnaeus, 1766)	V		1	TH
Osprey <i>Pandion haliaetus</i> (Linnaeus, 1758)	P	*	1	TH
Honey-buzzard <i>Pernis apivorus</i> (Linnaeus, 1758)	S	**	1	TH
Sparrowhawk <i>Accipiter nisus</i> (Linnaeus, 1758)	R		2	
Goshawk <i>Accipiter gentilis</i> (Linnaeus, 1758)	R	**/*	1	TH
Marsh Harrier <i>Circus aeruginosus</i> (Linnaeus, 1758)	S	**	1	
Montagu's Harrier <i>Circus pygargus</i> (Linnaeus, 1758)	V		1	
Rough-legged Buzzard <i>Buteo lagopus</i> (Pontoppidan, 1763)	W P	*	2	TH(1)
Buzzard <i>Buteo buteo</i> (Linnaeus, 1758)	R		1	
Water Rail <i>Rallus aquaticus</i> Linnaeus, 1758	R W	**/*	1	
Corncrake <i>Crex crex</i> (Linnaeus, 1758)	S		1	
Spotted Crake <i>Porzana porzana</i> (Linnaeus, 1766)	S	**	1	TH
Coot <i>Fulica atra</i> Linnaeus, 1758	R W		1	
Woodcock <i>Scolopax rusticola</i> Linnaeus, 1758	R W		1	TH
Green Sandpiper <i>Tringa ochropus</i> Linnaeus, 1758	P	*	1	
Barn Owl <i>Tyto alba</i> (Scopoli, 1769)	R		1	
Tawny Owl <i>Strix aluco</i> Linnaeus, 1758	R		1	
Long-eared Owl <i>Asio otus</i> (Linnaeus, 1758)	R W	**/*	1	
Short-eared Owl <i>Asio flammeus</i> (Pontoppidan, 1763)	R W	**/*	1	

	A	B	C	D
Kingfisher <i>Alcedo atthis</i> (Linnaeus, 1758)	R		1	
Kestrel <i>Falco tinnunculus</i> Linnaeus, 1758	R		1	
Merlin <i>Falco columbarius</i> Linnaeus, 1758	R W P	**/*	1	
Hobby <i>Falco subbuteo</i> Linnaeus, 1758	S	**	1	TH
Gyr Falcon <i>Falco rusticolus</i> Linnaeus, 1758	V		1	TH
Peregrine <i>Falco peregrinus</i> Tunstall, 1771	R W P	**/*	2	TH(2)
Hooded Crow <i>Corvus cornix</i> (Linnaeus, 1758)	V		1	
Waxwing <i>Bombycilla garrulus</i> (Linnaeus, 1758)	W P	*	1	
Crossbill <i>Loxia curvirostra</i> Linnaeus, 1758	R W	**/*	2	
Two-barred Crossbill <i>Loxia leucoptera</i> Gmelin, 1789	V		2	TH(2)
<i>Species taken in Caithness (27 specimens of 20 species)</i>				
Greylag Goose <i>Anser anser</i> (Linnaeus, 1758)	R	**/*	1	
Wigeon <i>Mareca penelope</i> (Linnaeus, 1758)	R W	**	2(+N)	TH(1)
Common Scoter <i>Melanitta nigra</i> (Linnaeus, 1758)	S	**	2(+N)	TH(2+N)
Ptarmigan <i>Lagopus muta</i> (Montin, 1776)	R	**/*	4	TH(3)
Red-breasted Merganser <i>Mergus serrator</i> Linnaeus, 1758	S	**	2	
Red-throated Diver <i>Gavia stellata</i> (Pontopiddan, 1763)	S	**	1	TH
Great Northern Diver <i>Gavia immer</i> (Brünnich, 1764)	V		1	TH
Cormorant <i>Phalacrocorax carbo</i> (Linnaeus, 1758)	R		2	
Goshawk <i>Accipiter gentilis</i> (Linnaeus, 1758)	V		1	TH
Rough-legged Buzzard <i>Buteo lagopus</i> (Pontoppidan, 1763)	W P		*	I
Dunlin <i>Calidris alpina</i> (Linnaeus, 1758)	S		1	
Redshank <i>Tringa totanus</i> (Linnaeus, 1758)	S		1(+Y)	
Greenshank <i>Tringa nebularia</i> (Gunnerus, 1767)	S	**	1	
Black-headed Gull <i>Chroicocephalus ridibundus</i> (Linnaeus, 1766)	S		1(+Y)	
Herring Gull <i>Larus argentatus</i> Pontoppidan, 1763	S		1	
Arctic Skua <i>Stercorarius parasiticus</i> (Linnaeus, 1758)	S	**	1	TH
Snowy Owl <i>Bubo scandiacus</i> (Linnaeus, 1758)	V		1	TH
Merlin <i>Falco columbarius</i> Linnaeus, 1758	R	**/*	1	
Peregrine <i>Falco peregrinus</i> Tunstall, 1771	R	**/*	1	TH
Raven <i>Corvus corax</i> Linnaeus, 1758	R	**/*	1	TH
<i>Species taken elsewhere (8 specimens of 7 species)</i>				
Great Northern Diver <i>Gavia immer</i> (Brünnich, 1764)	V		1	
Gannet <i>Morus bassanus</i> (Linnaeus, 1758)	S		1	
Golden Eagle <i>Aquila chrysaetos</i> (Linnaeus, 1758)	R	**/*	1	
Montagu's Harrier <i>Circus pygargus</i> (Linnaeus, 1758)	S	**	1	
White-tailed Eagle <i>Haliaeetus albicilla</i> (Linnaeus, 1758)	R	**/*	2	
Curlew <i>Numenius arquata</i> (Linnaeus, 1758)	R S		1	
Common Guillemot <i>Uria aalge</i> (Pontoppidan, 1763)	S		1	
<i>Species for which location taken unknown, but most probably from Lakeland (58 specimens of 47 species)</i>				
Shelduck <i>Tadorna tadorna</i> (Linnaeus, 1758)	R		2(+Y)	
Tufted Duck <i>Aythya fuligula</i> (Linnaeus, 1758)	R W	**	1	
Harlequin Duck <i>Histrionicus histrionicus</i> (Linnaeus, 1758)	V		1	TH
Long-tailed Duck <i>Clangula hyemalis</i> (Linnaeus, 1758)	W		1	TH
Smew <i>Mergellus albellus</i> (Linnaeus, 1758)	W	*	2	
Capercaillie <i>Tetrao urogallus</i> Linnaeus, 1758	R	**/*	2	
Quail <i>Coturnix coturnix</i> (Linnaeus, 1758)	S	**	2	TH(2)
Black-throated Diver <i>Gavia arctica</i> (Linnaeus, 1758)	S	**	1	
Storm Petrel <i>Hydrobates pelagicus</i> (Linnaeus, 1758)	S		1	
Little Bittern <i>Ixobrychus minutus</i> (Linnaeus, 1766)	V		1	
Night-heron <i>Nycticorax nycticorax</i> (Linnaeus, 1758)	V		2	
Cattle Egret <i>Bubulcus ibis</i> (Linnaeus, 1758)	V		1 ^e	
Little Egret <i>Egretta garzetta</i> (Linnaeus, 1766)	V		1 ^e	
Gannet <i>Morus bassanus</i> (Linnaeus, 1758)	S		1	

	A	B	C	D
Hen Harrier <i>Circus cyaneus</i> (Linnaeus, 1766)	S	**/*	2(1 ^e)	TH (2)
Red Kite <i>Milvus milvus</i> (Linnaeus, 1758)	R	**/*	2 ^e	TH (2)
Oystercatcher <i>Haematopus ostralegus</i> Linnaeus, 1758	R S		I	
Black-winged Stilt <i>Himantopus himantopus</i> (Linnaeus, 1758)	V		I	
Avocet <i>Recurvirostra avosetta</i> Linnaeus, 1758	V		I	
Lapwing <i>Vanellus vanellus</i> (Linnaeus, 1758)	R S		I	
Golden Plover <i>Pluvialis apricaria</i> (Linnaeus, 1758)	R S		I	
Grey Plover <i>Pluvialis squatarola</i> (Linnaeus, 1758)	P	*	I	TH
Ringed Plover <i>Charadrius hiaticula</i> Linnaeus, 1758	R W P		I	
Dotterel <i>Charadrius morinellus</i> Linnaeus, 1758	S	**	I	
Turnstone <i>Arenaria interpres</i> (Linnaeus, 1758)	W P		I	
Ruff <i>Calidris pugnax</i> (Linnaeus, 1758)	W P	*	3	
Curlew Sandpiper <i>Calidris ferruginea</i> (Pontoppidan, 1763)	P	*	1 ^e	
Jack Snipe <i>Lymnocyptes minimus</i> (Brünnich, 1764)	W P		I	
Great Snipe <i>Gallinago media</i> (Latham, 1787)	W	*	I	
Snipe <i>Gallinago gallinago</i> (Linnaeus, 1758)	R S W P		I	
Green Sandpiper <i>Tringa ochropus</i> Linnaeus, 1758	P	*	I	
Wood Sandpiper <i>Tringa glareola</i> Linnaeus, 1758	P	*	1 ^e	
Little Auk <i>Alle alle</i> (Linnaeus, 1758)	V		2	
Common Guillemot <i>Uria aalge</i> (Pontoppidan, 1763)	S P		I	
Razorbill <i>Alca torda</i> Linnaeus, 1758	S P		I	
Puffin <i>Fratercula arctica</i> (Linnaeus, 1758)	S P		I	
Scops Owl <i>Otus scops</i> (Linnaeus, 1758)	V		2	TH(1)
Little Owl <i>Athene noctua</i> (Scopoli, 1769)	R	**/*		
Tengmalm's Owl <i>Aegolius funereus</i> (Linnaeus, 1758)	V		I	
Eagle Owl <i>Bubo bubo</i> (Linnaeus, 1758)	X		I	TH
Roller <i>Coracias garrulus</i> Linnaeus, 1758	V		I	TH
Hoopoe <i>Upupa epops</i> Linnaeus, 1758	V		I	TH
Great Spotted Woodpecker <i>Dendrocopos major</i> (Linnaeus, 1758)	R		I	
Merlin <i>Falco columbarius</i> Linnaeus, 1758	R W P	**/*	I	
Nuthatch <i>Sitta europaea</i> Linnaeus, 1758	R		I	
Snow Bunting <i>Plectrophenax nivalis</i> (Linnaeus, 1758)	W		I	

Appendix II. Mammal species in the Edenhall Collection (15 specimens of 10 species)

(Columns and symbols as Appendix I; X, extinct in Lakeland; †, species with populations that declined sharply in the 19th and early 20th centuries, and subsequently went extinct; ‡, species with populations that were probably declining in the 19th century)

Red Squirrel <i>Sciurus vulgaris</i> Linnaeus, 1758	R	‡	I	
Fox <i>Vulpes vulpes</i> (Linnaeus, 1758)	R		2(+Y)	
Otter <i>Lutra lutra</i> (Linnaeus, 1758)	R	‡	4(+Y)	
Badger <i>Meles meles</i> (Linnaeus, 1758)	R		I	
Pine Marten <i>Martes martes</i> (Linnaeus, 1758)	R	†	I	TH
Stoat <i>Mustela erminea</i> Linnaeus 1758	R		I	
Weasel <i>Mustela nivalis</i> Linnaeus, 1766	R		I	
Polecat <i>Mustela putorius</i> Linnaeus, 1758	R	†	I	TH
Wildcat <i>Felis silvestris</i> Schreber, 1777	X		I	
Red Deer <i>Cervus elaphus</i> Linnaeus, 1758	R		2	

The specimens were obtained as follows:

Lakeland: Otter (4), Polecat (1) and Red Deer (2).

Elsewhere in Britain: Wildcat (1).

Where taken unknown (but probably Lakeland): Red Squirrel (1), Fox (1), Badger (1), Pine Marten (1), Stoat (1) and Weasel (1).